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EPA Region 5 Records Ctr.

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OCT 1 4 1980

ENVIRONMENTAL PROTECTION AGENCY STATE OF ILLINOIS

Mr. Dan Flynn
Land Permit Section
Illinois Environmental Protection Agency
2200 Churchill Road
Springfield, Illinois 62706

Dear Mr. Flynn:

Process Alliance Partnership (PAP) was informed, by a letter dated August 8, 1980 from Rama K. Chaturvedi of your agency, of the need to apply to IEPA for a site permit for the PAP activity in Joliet. The permit application in question is enclosed with this letter of transmittal.

I am enclosing a copy of the letter from Mr. Chaturvedi because it requested information supplemental to the permit application. I also wish to address the necessity for an IEPA air pollution permit and contingency operational plans.

The additional information concerning PAP's process and operations are included herein as an attachment to this transmittal letter.

Please let me know if you have any questions or need additional information.

Sincerely,

Donald E. Matschke, PhD, PE

Douges E. Marsey

PRESIDENT

D.E.MATSCHKE COMPANY

DEM: em

D.E.MATSCHKE COMPANY TWO SALT CREEK LANE HINSDALE, IL 60521 312-654-1970

CC- Sy Levine, Maywood IEPA 📂



Environmental Protection Agency

2200 Churchill Boad, Springfield, Illinois 62706

217/782-6760

Reference: Process Alliance Partnership - 19704521

August 8, 1980

Process Alliance Partnership Two Salt Creek Lane Hinsdale, Illinois 60521

Attention: Donald Matschke

Gentlemen:

The Illinois Pollution Control Board requires that solid waste management sites engaged in the process of storage, processing or disposl of solid wastes are subject to permit requirements pursuant to Rules 201, 202 and 203 of Chapter 7 of the Rules and Regulations adopted by the Illinois Pollution Control Board. Since your facility has not submitted a permit application and therefore has not received a permit from the Illinois Environmental Protection Agency, Division of Land/Noise Pollution Control, we hereby inform you that any registration/authorization numbers issued by this Agency authorizing your site to accept waste from particular generators shall expire within ninety (90) days from the date of your receipt of this letter.

In order for your facility to obtain the necessary permits, it will be necessary that you submit a permit application within sixty (60) days from the date of your receipt of this letter. A permit review of your application will be completed before this Agency deems the registration/authorization numbers to be voided. The required application form is enclosed herein. If the permit review process should take this Agency longer than thirty (30) days, your registration/authorization numbers shall remain valid until such review is completed.

The permit application should contain the following additional information in addition to the information provided on the application for permit to develop a solid waste management site:

- 1. A flow diagram and blue prints of the storage, treatment, and process.
- 2. A description of the process including as to how the individual waste components are processed before being discharged or disposed of into the air, water and land.

Page 2

- 3. Details of any contingency plans or procedures to cope with any accidents or spills involving special wastes. Any embankment, dikes, internal drainage system or the like should be shown on your plan sheets.
- 4. Methods used to screen, analyze the waste, frequency of such analysis, and degree of variability accepted of each component in the waste.
- 5. A listing of all other permits applied for and/or obtained by the facility.

If no on-site disposal is requested or planned at your facility, Part III -- Site Characteristics and Part IV -- questions 25 and 26 may be omitted.

The application must be signed by the owner(s), the applicant(s), and a registered professional engineer. All signatures must be properly attested. The president of any corporation must sign the application or give his written authority to another person.

Please reference all site code and registration/authorization numbers assigned with any submissions or any correspondence concerning this matter. If you have any questions or if we can be of any assistance to you in preparation of this permit application, please contact us or one of our Regional Offices in your area.

Very truly yours.

Rama K. Chaturvedi, P.E., Manager

Special Waste Unit

Residual Management Section

Rama K. Chaturrush

Division of Land/Noise Pollution Control

RKC:MDR:jb/0192H/2-3

Enclosures: Environmental Protection Act

Solid Waste Rules and Regulations Special Waste Hauling Regulations

(2) Application for Permit to Develop a Solid Waste

Management Site

cc: Northern Petrochemical (997204)

PAP SUPPLEMENTAL INFORMATION

- 1. Exhibit 3 is a flow diagram of the storage, treatment and process facilities of PAP. This PAP process is proprietary and patent applications are pending.
- 2. PAP has a contract with Northern Petrochemical Company (NPC) to process a spent caustic scrubber stream. The scrubber stream is produced as a by-product from the production of ethylene which NPC produces for the manufacture of polyethylene and ethylene glycol (antifreeze). The spent scrubber stream contains approximately 95 percent water, 2 to 5 percent sodium hydroxide, a few percent sodium carbonate, 1000-2000 ppm of sodium sulfide, trace sodium cyanide, and small quantities of dissolved and separate phase organics that are side products from the manufacture of ethylene,

Pap receives the spent scrubber solution in a PAP tractor-trailer that travels the approximate 15 mile route from NPC either along Interstate 80 or Route 6. The spent scrubber solution is transferred to storage tanks where a nominal 24 hour storage is accomplished. Any separate phase organics present are floated during this period and accumulate in an odorous oily float layer on the surface of the tank contents. The remaining scrubber solution, usually in excess of 99 per cent, is drawn from the bottom of the storage tank and submitted to further processing.

After a number of subsequent filling and floating cycles, the oily layer gradually accumulates to a few inches of thickness. At this point the oil is transferred to a tank for transport and sale to an organic reclaiming company.

The subnatant scrubbing solution is drawn from the bottom of the storage tanks and reacted with spent pickling acid or etchant from the steel or electronic industries. The dissolved metal ions in the pickling acid or etchant react preferentially with the sulfide in the scrubber solution to produce solid phase metallic sulfides. Additional metallic ion reacts with the trace cyanide content of the scrubber solution to form solid phase complex cyanides. The acidity of the spent pickle liquor or etchant serves to simultaneously neutralize the basicity of the scrubber solution. Additional quantities of organics break from solution during these precipitation reactions and adsorb on the surface of the precipitated solids. Excess metallic ion is converted to the respective metallic hydroxide.

The unique advantages of the process are 1) sulfide is converted to an innocuous solid such as ferrous sulfide without contributing any odor problem, 2) cyanides are removed from the scrubber solution and inactivated in a solid phase, 3) organics are removed in two stages to produce a relatively deodorized scrubber solution and 4) some reclamation of organic values is accomplished.

After the initial sequence of process operations the neutralized scrubber solution is brought to a final pH of 9-9.5, conditioning polymers are added to effect flocculation of the solids, decantation of clear supernatant is accomplished, addition of diatomaceous filter aid is added as necessary as is additional conditioning polymer when necessary and finally the liquid-solid slurry

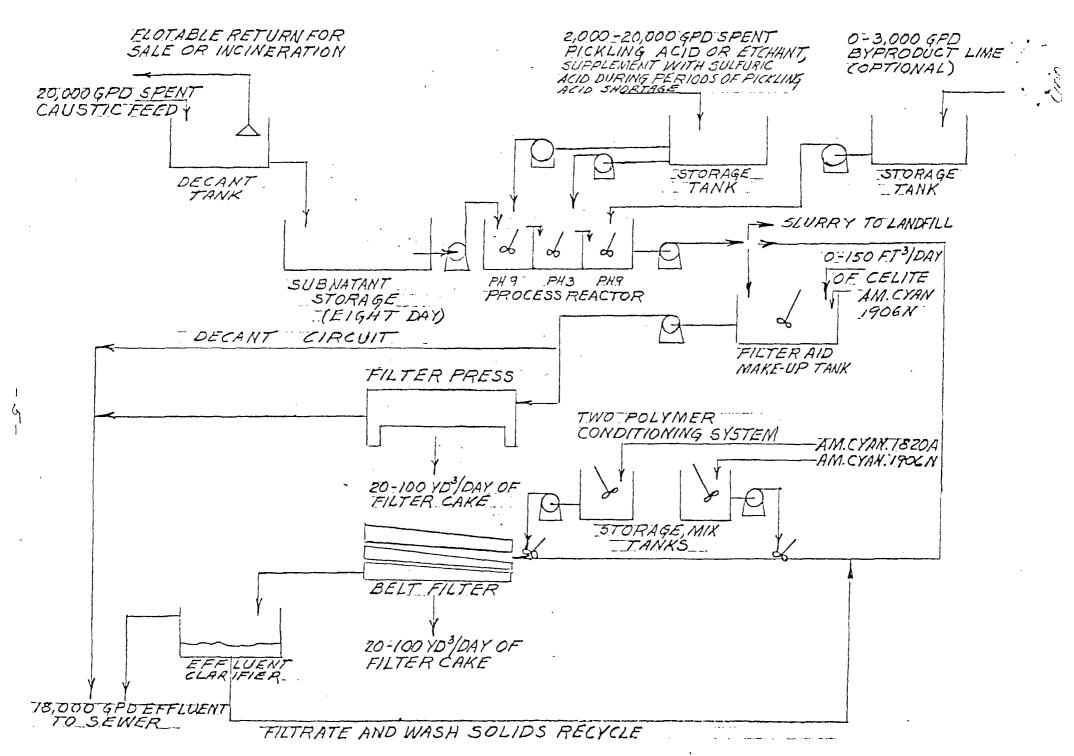


EXHIBIT 3-PLAN OF PAP SPENT CAUSTIC SCRUBBER PROCESS

is fed to one of two filters to produce a clear filtrate and a dry filter-cake. The clear decant and filtrate are of acceptable quality for discharge to a municipal sewage treatment system while the filter-cake is non-hazardous and can be managed by most land-fills.

Options for this process include virgin acid supplementation when spent pickling acid or etchant and supplies are low due to down-turns in the economy and provision for abundant use of spent pickle-liquor and etchant when those materials are abundant. In the latter case, intermediate pH values of 3 or lower may be achieved with final discharge pH of 9-9.5 attained by the use of byproduct lime.

A future byproduct resource use for the resulting filter-cake is a possibility which will be explored.

3. Spills in the outside yard facilities will not occur in the permanent PAP facility currently under construction. Unloading and transfer facilities are completely closed and vapor-tight. Over-filling of storage tanks will only result in recycling of the transferred material back to the source tank-trailer. Any occasional spills at the connection terminals will be contained in a diked area for prompt recovery.

The concentrated, virgin acid storage is underlain by a diked area. Pumping provisions are available, in the unlikely event of a spill, to transfer spilled acid into the inside processing tanks.

Spills inside the PAP processing building will be contained by appropriate diking with recovery of spilled materials accomplished by means of a combination of sump pumps and wet-vacuums. Any spilled materials will be recycled to the process or, in instances when compatible with sewer acceptance standards, will be discharged to the sewer system.

If, for any reason, a spill should become uncontrolled, either inside or outside the building, the site topography will control the direction of flow towards the sea-wall. There the spill would be contained and would be prevented from accessing surface water until recovery.

4. Each incoming tanker-load of spent caustic scrubber solution is examined for specific gravity simultaneous with transfer to storage. This provides an insight into organic concentrations and a preliminary indication of solution concentrations.

Subsequently, each charge to the processing system is examined for and adjusted for metallic ion stoichiometry in order to guarantee that all sulfide and cyanide concentrations are reacted. Such tests are routinely made eight to twelve times per 24 hour day.

The spent caustic scrubber solution incoming concentrations of sodium hydroxide and sulfides may vary over long time periods such as days to weeks by a factor of two. On a batch to batch or day to day basis such variation is not encountered. The specific gravity measurements provide early indications for such changes.

5. Other IEPA permits applied for and obtained by the PAP facility are as follows:

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- Chicago/Land and Lakes #3 landfill permit for management of PAP filter-cake, Auth. No. 801485
- Joliet/Lockport trucking landfill permit for management of PAP filter-cake, Auth. No. 801485
- Chicago/Land and Lakes #3 landfill permit for management of PAP slurry, Auth. No. 802070

Construction and operation permit for water pollution control facilities described as follows:

Installation of an industrial process to treat a spent caustic scrubber stream consisting of a decant tank, subnatant storage tank, pH process reactor tanks, storage tank, a plate and frame filter press, a belt filter, two polymer conditioning systems, an effluent clarifier and all necessary piping and pumping designed to treat approximately 20,000 gallons per day of spent caustic. Discharge of approximately 18,000 gpd (180 P.E.) to an interceptor sewer located between Route 6 and the DesPlaines River thence tributary to the Joliet Eastside STP. Permit No.: 1980-EA-0827

6. The IEPA in a July 23, 1980 letter from Sy Levine, Maywood Office has raised the possibility that IEPA air pollution permits might be required at PAP, Joliet. Two points were cited in the letter, which is herein appended, and will now be discussed.

Illinois Air Pollution Cont Reg 103(b) requires citation of PAP by the agency for a specified air contaminant for which there exist IPCB emission standards or other specific limitations. To the best of PAP's knowledge there exists no such air pollution causing emission from their Joliet processing facility or equipment.

PAP has been advised bycounsel that the IPCB has previously held that the Illinois Environmental Protection Act Section 9(a) is a general prohibition, and that the IEPA has an obligation to specify allegedly offensive omissions in order to implement this section. A reference for this IPCB opinion is EPA vs. COMMONWEALTH EDISON COMPANY, IPCB #70-4; also IPCB Opinions, Vol. 1, p. 207 (specifically p. 209 - 211). In that spirit, if there is a specific contaminant which PAP is emitting in such a way to cause air pollution, please advise us of that contaminant. PAP is aware of none.

While in the past there may have been odor problems, PAP has now substantially eliminated these problems. The further steps PAP is taking in their permanent facilities will totally eliminate any such problem.



1701 S. First Street Maywood, IL. 60153

July 23, 1980

Mr. Al Tenney Processed Alliance Partnership 608 Railroad Street Joliet, Illinois 60436

Dear Mr. Tenney:

The Illinois Environmental Protection Agency conducted an investigation of your facility on July 18, 1980 and found the following apparent violations:

Illinois Air Pollution Control Regulations Rule 103(b) which states that no person shall cause of allow the operation of any new emission source without first obtaining an Operating Permit from the Agency. Such sources include two (2) filter presses, a reactor vessel and storage tanks.

Illinois Environmental Protection Act Section 9(a) which states that no person shall cause or threaten or allow the discharge or emission of any contaminant into the atmosphere in sufficient quantities and of such characteristics and duration as to be injurious to human, plant, or animal life, to health, or to property, or to unreasonably interfere with the enjoyment of life or property.

This information is provided to allow you to verify or dispute the Agency's findings.

Mr. Al Tenney Processed Alliance Partnership

If you have any questions, please do not hesitate to contact us.

Sincerely,

William Withrow

Environmental Protection Specialist

William Withrow

Sy Levine, P.E.

Regional Manager-FOS/DAPC

WW/SL/sl

cc: Miles Zamco Peter Orlinsky Permit Section Region I File

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7. In the operation of the PAP Joliet facilities, separate non-hazardous liquid and non-hazardous solid streams are produced. The two streams are separated for reasons of economics inasmuch as the management of a given amount of volume in a landfill is more costly than the management of a comparable volume in a municipal waste treatment plant. For that reason PAP separates and delivers a clear effluent to a treatment plant and only the necessary amount of solid volume to a landfill.

The neutral slurry that is produced after precipitation of the sulfides, cyanides and organics but before the addition of conditioning chemicals and the filtration process is also a non-hazardous stream, having undergone all the inactivation reactions. In other words, the sum of the liquid and the solid streams is no more or less hazardous than the individual parts. Thus, a non-hazardous landfill that is qualified to accept liquid products would be qualified to accept the neutral slurry product from the PAP Joliet process.

While PAP generally is not interested in this mode of operation for economic reasons, there are times when it would be prudent to have this option available for contingency use. Taking a filter out of operation for maintenance could be one of these times. PAP will be applying to IEPA for a slurry landfill management permit sometime in the future.



Environmental Protection Agency

2200 Churchill Road, Springfield, Illinois 62706

	Waste Check if Applicable
APPLICATION FOR PERMIT TO DEVELOP A SOLID WASTE MANAGEMENT SITE	Storage Transfer Processing Recovery Incineration Other

In Accordance With The Environmental Protection Act

All information submitted as part of the Application is available to the public except when specifically designated by the Applicant to be treated confidentially as regarding a trade secret or secret process in accordance with Section 7(a) of the Environmental Protection Act.

APPLICATION MUST BE SUBMITTED IN DUPLICATE

PART I - APPLICANT INFORMATION

1.	Name of Applicant	PROCESS A. (Person	responsible for op	eration)
2.	Address of Applican	t 608 RA	reet, P.O, Box, or	R. R. #)
	Cit	y y	/22 mois State	<i>60436</i> Zip Code
	Tel	ephone: 8/3 (Area	- 722-0900 Code) (Number)	
3.	Name of Land Owner	fo8EK	T BARKER (If same as above,	so indicate)
4.	Address of Land Ow	ner <i>900</i>	PAIL ROAD STRE (Street, P.O. Box,	
		JOLIET	LUINOIS	60436
	Ĉi	ty	State	Zip Code

STPR 5/15/79 LPC-7 Rev. 5/79

			PROCESS Muin			
	6.	Address of Site_	608 RAILPO (Stree	1. STAFET	or R R #V	
			City	State	0/5	Zip Code
				County		
	7.	Land ownership (Check Applicable			_
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В.	SITE	BACKGROUND (Che	eck Applicable Bo	x or Boxes)		
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		PART I I	- LOCATIO	NINFOR	MOITAM	<u>l</u>
Α.	ZONI	NG AND LOCAL REC	QUIREMENTS			
	9.	Present zoning	classification o	f site	IZ	
	10.	Does present zo (✔ Yes ()	oning of site all No.	ow the propos	ed usage?	
	11.	Restrictions (i	if any)			

12.	. Check applicable boxes which describe the use of adjacent properties surrounding site.					
	a. No b. Ea c. So d. We	rth () st () uth ()	Commercial () () () ()	Industrial (Y) (Y) (Y)	Agricultural () () () ()	Others* () () ()
	*SPEC	IFY USE CLASSIF	ICATION	INDUSTR.	196	
13.	a.	Are there any or other requiplanning commistate agency, () Yes () A	rements or r ssion, count or other gov	estrictions y, county he erning body?	by any municip alth departmen	pality, nt,
		EXCAVATION R.	AMIT, SEWER	Pogmit, Fou	NEATTON PEGENIT,	Padinbing ;
		PIPING PERIMIT	ELECTRICAL	Regnit IN A	ROCESS)	
	b.	Have these recapproved by the jurisdiction?	e agency or			en
	с.	If the answer supporting doc		es, include p	hotocopies of	
LOC	ATION					
14.	topo	ch a copy of th graphic quadrar minute quadrar	igle map of t	he area whic		
	Quad	rangle Map Prov	vided: Jo	Name	<i>1973</i> Date	<u> </u>
15.	a.	Outline on the location and e			adrangle map t	he
	b.	Provide a legal		on of the sit	e. (Typewritt	en on
		0,5 Acres of Section Range 10E	in <i>NW</i> Quart 16 , To	ter, <u>3E</u> Qu pwnship <u>3</u> P.M.	narter, <u>SW</u> (∤uarter,

В.

- 16. General characteristic: (Flood Plain, Hillside, Field, Strip
 Mine, Quarry, Gully, Gravel Pit, Swamp, etc.)
 Briefly describe: FILLED FILED FLOOD PLAIN THAT IS GENERALLY BOLATED

 FROM OVERBANG FLOODING BY THE INS PLANES FINES SEA-WALL AND THE PEQULATION

 SUPPLIED BY THE BEANDAN SOND LONG AND DAM WHICH & ADDRES, O. S. MILES SOUTH OF PAP.
- 17. Plot the following information on the U.S.G.S. quadrangle topographic map, if within the site or adjacent to the outer perimeter of facility:
 - a. Wells (domestic, industrial, etc.)
 - b. Public water sources (wells, stream, etc.)
 - c. Residences or residential areas, commercial facilities, sewage treatment facilities, industries, institutions, etc.
 - d. Other treatment facilities not shown on topographic map such as diverted steams, strip mines, ponds, etc.

If scale of quadrangle map is not sufficient, show the above items on a separate topographic map (See Part IV - A - 23).

PARTIII - SITE CHARACTERISTICS (Nor AMPLICABLE)

To Be Completed If Land Disposal Of Waste On Site Is Requested

A. GEOLOGY - HYDROLOGY

NOTE: The instructions for this Part of the Application should be read carefully prior to initiating the data-gathering program for the site.

Provide subsurface information in comprehensive detail, sufficient to allow thorough evaluation of the hydrologic and geologic conditions beneath and surrounding the site. This data must fully describe the hydrogeologic interrelationships of the landfill facility, local ground waters, and surface waters. All information requested in sections 18 through 22 should be integrated and presented as a detailed hydrogeologic report.

B. GEOLOGY

GENERAL GEOLOGIC SETTING

18. Provide a brief description of the general geography of the region in which the site is located, and a summary of the hydrogeologic conditions typical of that portion of Illinois.

APPLICATION FOR A DEPARTMENT OF THE ARMY PERMIT For use of this form, see EP 1145-2-1

The Department of the Army pennit program is authorized by Se	
P. L. 92-500 and Section 103 of P. L. 92-532. These laws required the United States, the discharge of dredged or fill madedged material for the purpose of dumping it into ocean water the application for a permit. Information in the application is a Disclosure of the information requested is voluntary; however, applicant and to evaluate the permit application. If necessary cessed nor can a permit be issued. One set of original drawings or good reproducible copies which	dection 10 of the River and Harbor Act of 1899, Section 404 of quire permits authorizing structures and work in or affecting navigable naterial into waters of the United States, and the transportation of ers. Information provided in ENG Form 4345 will be used in evaluating smade a matter of public record through issuance of a public notice, the data requested are necessary in order to communicate with the yinformation is not provided, the permit application cannot be pro
BRALLER TON (TAMES DUNN CHEAD)	HAS GIVEN VERRAL APPROVAL TO THIS 15T.): CONFIGMING LETTER 15 TO FOLLOW 2. Date 3. For Corps use only.
1. Application number (To be assigned by Corps)	2. Date 3. For Corps use only.
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	26 9 80
	Day Mo. Yr.
4. Name and address of applicant. PROCESS ACCIONCE PAGYNESSAMP 608 PANKOAD ST. JOLIET, LEWAYS 60\$36	5. Name, address and title of authorized agent. DONALD E. MATSCHKE D. E. MATSCHKE COMPANY TWO SALT CREEK LAWE HMSDALE, ILL WOIS 60521
Telephone no. during business hours	Telephone no. during business hours
A/C (815) 722-0900	A/C (312) 659-1970
A/C ()	A/C ()
WITH MECHANICAL JOINTS TO	
	sporty aware loccope atc. whose property also adjoins the waterway.
7. Names, addresses and telephone numbers of adjoining prop	sperty owners, ressees, etc., whose property also adjoins the waterway.
7. Names, addresses and telephone numbers of adjoining prop TOLIET PROJECT OFFICE	
JOLIET PROJECT OFFICE	CHARLES BOROWI 1015 HELEN AVE.
JOLIET PROJECT OFFICE U.S. APMY CORPS OF GASMEERS	CHARLES BOROWI 1015 HELEN AVE.
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JOLIET PROJECT OFFICE U.S. APMY CORPS OF CHYMEENS 622 RAILPORD STREET JOLIET, ILLINOIS 60434 8. Location where proposed activity exists or will occur. Address:	CHARLES BORONI 1015 HELEN AVE. JOLIET, ILLINOIS 60433
JOLIET PROJECT OFFICE U.S. APMY CORPS OF CHYMEENS 622 RAILPORD STREET JOLIET, ILLINOIS 60434 8. Location where proposed activity exists or will occur. Address:	CHARLES BOROWI 1015 HELEN AVE. JOLIET, ILLINOIS 60433
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JOLIET PROJECT OFFICE U.S. APMY CORPS OF CHYMEERS 622 RAILPORD STREET JOLIOT, ILLINOIS 60434 8. Location where proposed activity exists or will occur. Address: 608 RAILPORD STREET Street, road or other descriptive location	CHARLES BOROWI 1015 HELEN AVE. JOLIET, ILLINOIS 60433 Tax Assessors Description: (If known)
JOLIET PROJECT OFFICE U.S. APMY CORPS OF CHYMEENS G12 RAILPORD STREET JOLIET, ILLINOIS 60434 8. Location where proposed activity exists or will occur. Address:	CHARLES BOROWI 1015 HELEN AVE. JOLIET, ILLINOIS 60433 Tax Assessors Description: (If known)
JOLIET PROJECT OFFICE U.S. APRIY CORPS OF CHYMERS 622 RAILPORD STREET JOLIOT, ILLINOIS 60434 8. Location where proposed activity exists or will occur. Address: 608 RAILPORD STREET Street, road or other descriptive location JOLIET, ILLINOIS 60436 In or near city or town	Tax Assessors Description: (If known) Map No. Subdiv. No. Lot No. Sec. Twp. Rge.
JOLIET PROJECT OFFICE U.S. ARMY CORPS OF CHYMERS 612 PAILPOAD STREET JOLIET, ILLINOIS 60434 8. Location where proposed activity exists or will occur. Address: 608 PAILPOAD STREET Street, road or other descriptive location JOLIET, ILLINOIS 60436	Tax Assessors Description: (If known) Map No. Subdiv. No. Lot No. Sec. Twp. Rge.

DES PLAINES PIVER

ENG Form 4345, 1 OCT 77

9. Name of waterway at location of the activity.

Edition of 1 Apr 74 is obsolete.

Date activi	ty is expecte	ed to be completed			
		e reasons in the rema		nplete? YES ar the activity was completed activity was completed activity was completed activity.	
			by other federal, interstate s described in this applica	, state or local agencies fo	or any structures, constr
/ (Issuing	•	Type Approval	Identification No.	Date of Application	Date of Approval
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Ciryo	F Soult	",1	NONE	7/80	7/80
		approval for the acti	vity described herein or fo	r any activity directly rela	ted to the activity
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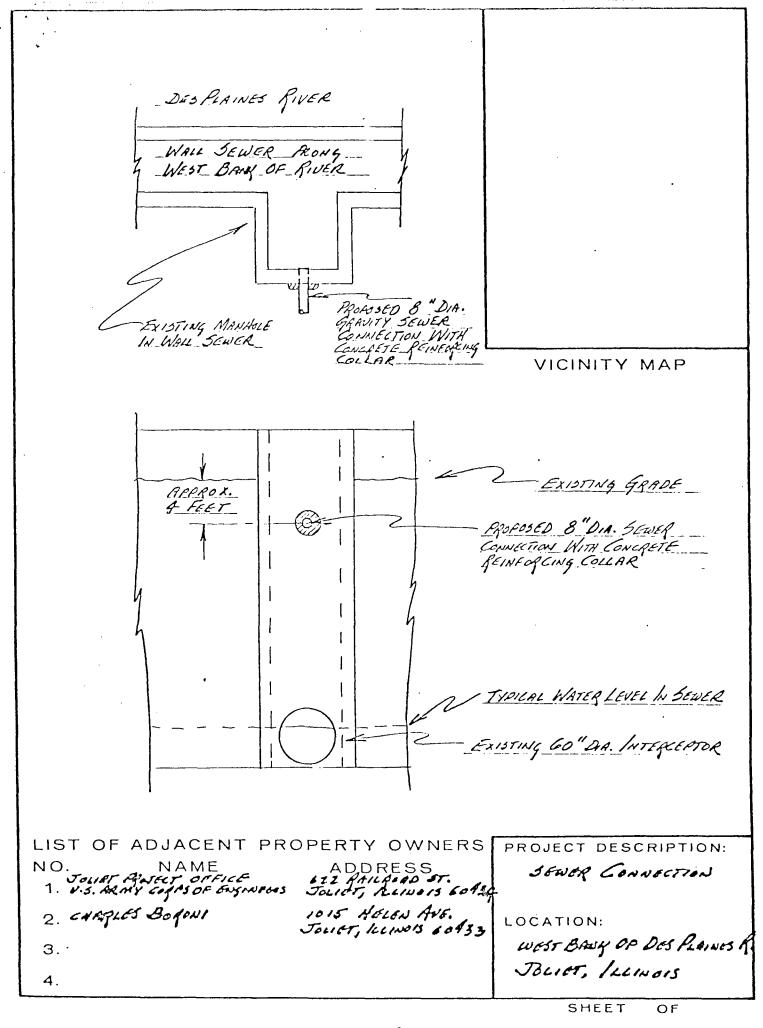
The application must be signed by the applicant; however, it may be signed by a duly authorized agent (named in Item 5) if this form is accompanied by a statement by the applicant designating the agent and agreeing to furnish upon request, supplemental information in support of the application.

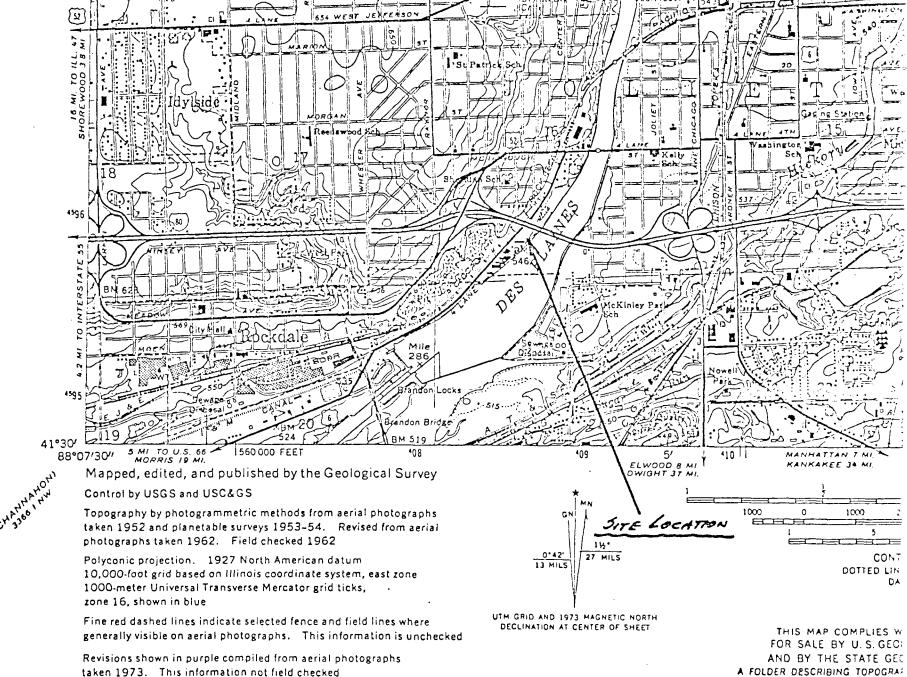
18 U. S. C. Section 1001 provides that: Whoever, in any manner within the jurisdiction of any department or agency of The United States knowingly and willfully falsifies, conceals, or covers up by any trick, scheme, or device a material fact or makes any false, fictitious or fraudulent statements or representations or makes or uses any false writing or document knowing same to contain any false fictitious or fraudulent statement or entry, shall be fined not more than \$10,000 or imprisioned not more than five years, or both. Do not send a permit processing fee with this application. The appropriate fee will be assessed when a permit is issued.

DONALD E. MAT

Signature of Applicant or Authorized Agent

c/3/





Purple tint indicates extension of urban areas

WHITE COPY TO APPLICANT
PINK COPY TO ACCOUNTS AND FINANC
YELLOW COPY TO FIELD ENGINEER
GREEN COPY TO PLUMBING DEPT.
3 PCI 11-76 BLUE COPY TO CITY ENGINEER

Department of Building

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EXCAVATION PERMIT CITY OF JOLIET

THIS PERMIT MUST BE AVAILABLE AT THE EXCAVATION SITE

Date SEPT 29 1980	Nº E 1768
Excavation Contractor PRIDE PLBG - PHONE	485-6111
Address 621 S. PINE ST. NEW LENOX, ILL	
Surety Bond No Name of Co	
Location Of Excavation 608 RAILROAD ST	
Name Of Owner PROCESS ALLIANCE Address SAM	
	ATED BELOW:
New Sewer Connection New Water Connection	
New Sewer Connection Sewer Service Replacement Water Service Replacement Water Service Extension	" RP 3 ch
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ALL CONNECTIONS MUST BE MADE BY A LICENSED PLUMBER AND CITY PLUMBING INSPECTOR OR CITY SEWER INSPECTOR.	•
Work To Start 9-29 1980 Work To Be Completed /	0-3 1980
Water Connection Permit No Sewer Connection Permit N	
Fee 2000 Approved: 1001 F	City Engineer
I agree to comply with the rules and regulations as stated on the reverse side of this perm	uit.
Signature of Applicant	
d/b/a	
AND CANTS CORY	TOWNS A RES CARD FORM A TAKE

APPLICANT'S COPY

→ PCI

CONTRACTOR TO CALL 726-2401 ON DATE OF STREET EXCAVATION ALL STREETS AND SIDEWALKS
MUST BE REPAIRED WITHIN
10 DAYS OF ISSUANCE OF
THIS PERMIT

epartment of LOCATION OF BUILDING 608 THIS PERMIT DOES NOT INCLUDE ELECTRICAL, HEATING, PLUMBING Building Inspector. OR SIGH PERMITS CITY OF THIS CARD MUST BE DISPLAYED

PART I,B,15,b

LEGAL DESCRIPTION OF PAP SITE

Lot Number 7 and 8 in Block 118 and the vacated north and south alley lying between said lots and Block 118 school section addition to Joliet, except that part of said Lot 7 occupied by Railroad Street; also that part of vacated Cherry Street lying between the east line of said Lot 8 and the said westerly retaining wall of said Illinois deep waterway, all in City of Joliet, Will County.

Parcel No. 7-16-323-003, 36.57 x 38.87 x 313.45 x 88.72 x 280.5

TYPE AND EXTENT OF SUBSURFACE MATER!ALS

- 19. Provide a complete log (description) of each boring made during the exploratory program, and include all other pertinent data so obtained.
- 20. Include the following information regarding the bedrock, if encountered during the boring program:
 - a. Depth(s) to bedrock.
 - b. Lithology (physical character) and hydrologic characteristics of the bedrock formation.
 - c. Name and age of the formations encountered during the boring operation and (or) which crop out on or adjacent to the site.

C. MATERIALS CLASSIFICATION AND ANALYSIS

- 21. Provide the following information for samples taken during the boring operation:
 - a. textural classification (U.S.D.A. system)
 - b. particle size distribution curves for representative samples
 - c. coefficient of permeability based on field and (or) laboratory determinations
 - d. ion-exchange capacity and ability to absorb and "fix" heavy metal ions

D. HYDROLOGY

- 22. Provide the following information regarding the hydrologic flow system in the area of the site:
 - a. Depth to water in boreholes at time of boring completion and periodic measurements until the water level has stabilized.
 - b. Rate(s) and direction(s) of ground-water movement.
 - c. A narrative description (with diagrams) of the design and installation procedures for all piezometers installed at the site. This shall include both water-level measuring piezometers and those installed for permanent use as water-quality monitoring points.
 - d. An analysis of the background ground-water quality, as per those constituents listed in the Instructions. Attach a copy of the laboratory report.
 - e. An outline of the procedures, devices, and personnel to be employed for the collection of periodic ground-water samples from the monitoring point(s) installed at the site.

PART IV - CONSTRUCTION PLANS

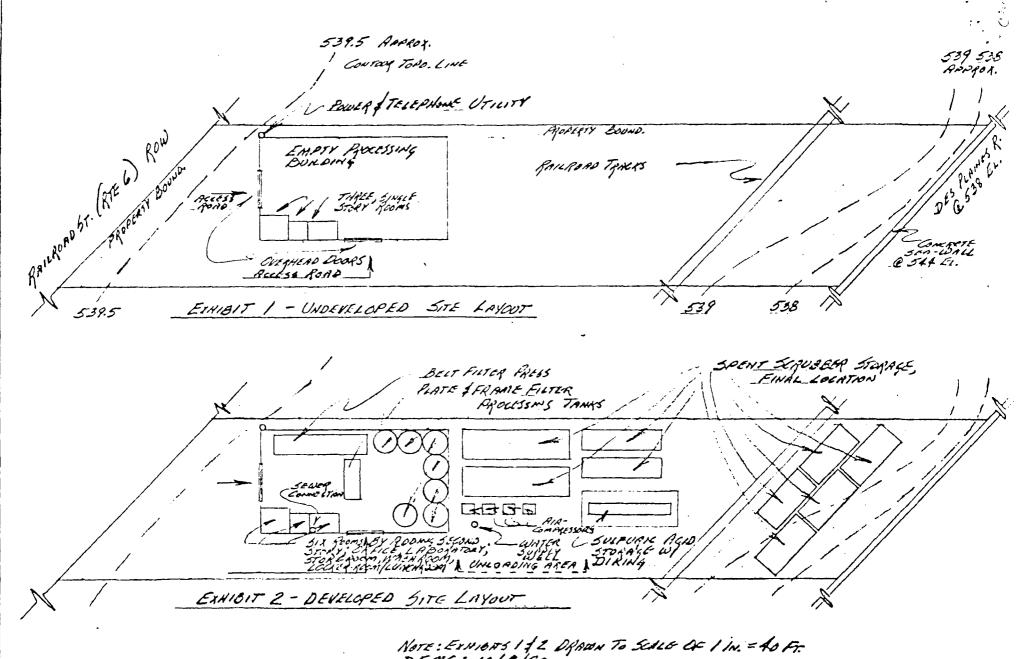
AND SPECIFICATIONS

A. SITE DEVELOPMENT PLAN

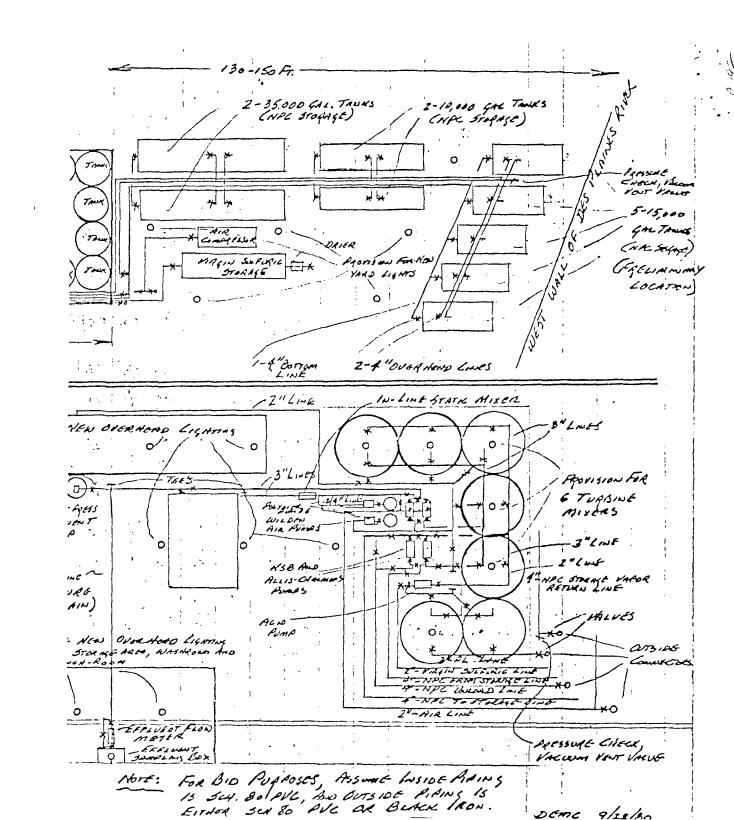
23. Provide a detailed topographic map of the existing site (Scale 1" = 200' or larger) showing 5-foot contour intervals on sites (or portions thereof) where the relief exceeds 20 feet, and 2-foot contour intervals on sites (or portions thereof) having less than 20 feet of relief. This map should show all buildings, ponds, streams, wooded areas, bedrock outcrops, underground and overhead utilities, roads, fences, culverts, drainage ditches, drain tiles, easements, streets, any other item of significance, including legal boundaries.

Show the location and elevation of borings as described in Part III - 19, 20.

- 24. Provide a separate map, at the same scale as that above, of the developed site showing the following: (See Fanciers Z, 4 \$5)
 - All changes in topography dictated by design and operational factors.
 - b. All surface features (as specified in IV A 23) both unaltered and modified, and installed as part of the facility. This shall include all new construction with location plans for berms, dikes, dams, earth barriers, surface drainage ditches, drainage devices, (culverts, tiles), fencing, access roads, entrance(s), utilities, buildings, sanitary facilities, monitoring well(s), streams, ponds, mines, and any other special construction as may be required to comply with the provisions of the Rules and Regulations.
 - c. Earth barriers, berms, dikes and other barriers, including essential dimensions of each.
- 25. Provide a topographic map of the closed and covered site showing final contours, with an interval of 5 feet if relief is greater than 20 feet, and intervals of 2 feet if relief is less than 20 feet. (Nor Appendix 1866)
- 26. Provide plan views (Scale 1" = 200') and cross sections of the leachate collection and treatment system, if utilized, including the following information: (Normanucasce)
 - a. Type, location and construction of subsurface collection system, and all attendant devices.
 - b. Location, dimensions, volume, and surface elevation of treatment lagoon(s), if used.
 - c. Detailed written narrative of the method and processes of the treatment system, and program for monitoring the performance and effectiveness of the treatment system.
 - d. Discharge point(s) of effleunt.



DEMC; 10/8/80 CERNIBITS 4 \$5 SHOW DETAILED LAYOUT, NOT TO SCALE



B. SCHEDULE OF CONSTRUCTION

27. Attach a typewritten narrative supplemented by indications on the plans of the sequence of areas to be developed. Estimate the date of beginning and ending of each phase of construction and operation. (See Arraeves)

C. CONSTRUCTION REQUIREMENTS

- 28. Attach a typewritten narrative supplemented by indications on the plans of provisions to be made for: (See Armenes)
 - a. Prevention of surface-water pollution.
 - b. Control of gas migration. (Nor Amoucuset)
 - c. Elimination of flood hazard, if any.
 - d. Employee facilities.
 - f. Measuring quantity of waste delivered to the site.

PART V - OPERATING PLAN

A. SOURCE AND VOLUME

29. Indicate the estimated quantity of each of the following sources and types of waste the facility will handle during each day of operations; each week of operation; each year of operation.

Specify any additional information regarding refuse source and quantity.

	SOURCE	TYPE	DAILY QUAN.	WEEKLY QUAN.	ANNUAL QUAN.
a.	Residential				
b.	Commercial				
с.	Industrial	LIGUID	ZO,000 To 30,000 GALLONS	140,000 TO 175,000 GAZLONS	7.3-9.1 MIL GAL
d.	Agricultural				
	Other (Describe)				

B. OPERATING REQUIREMENTS

- 30. Attach a typewritten description of provisions for: (Sec-Arracheo)
 - a. Personnel for supervision and operation
 - b. Traffic control

- c. Designation of unloading area
- d. Dust control
- Odor control e.
- f. Management of surface water
- g. Erosion control
- h. Monitoring program for gas [Nor Applicable]
 i. Reuse and recycling operations
- 31. Provide a list of equipment to be used for the operation:

ITEMS	MODEL NUMBER	NO. OF UNITS IN OPERATION	DESCRIPTION
STOPPSE TANKS		10	170,000 GAL TOTAL STRAIGE
PROCESS TANKS		7	45,000 GAL PROCESSING CARGET
PACTOR TRAILER	FORD, Acho	/	5,000 GAZ CAPACITY
FLATE FRAME FILTOR PRESS	SIAZIVER	/	600 FT2 FILTER ARCA. 54 FT3
EELT FILTER PACES	WICKHAM	/	FILTER CAUL CRIRCITY Z MATER WIDTH PRESS WITH STRINGS STREE BELT
AIR COMPGESSORS UTILITY TEACTOR	New Hockano	4	80-100 HP EquivaLENT
MISC. MIXERS, DMAS, ETC.		15-20	PANS OF SIST FACE 12" TO 3"
PICK-UN TRUCK	CHENTOLET	/	3/4 TON CAMPELTY

PART VI - NOTICE/LAND USE

- 32. In order that notice of intent be sent to those affected by this application, you shall provide these names and addresses to the Agency: (SEE ATTACHED)
 - State's Attorney of the county in which the site is located. a)
 - Chairman of the County Board of the county in which the site is b)
 - Each member of the General Assembly from the Legislative c) district in which the site is located. (Three Representatives, One Senator)

PART 1V, B. SCHEDULE OF CONSTRUCTION

		Current Status	Estimated Completion
27.	Sewer	Complete	Complete
	Plumbing & Piping	Underway	Nov. 30, 1980
٠	Electrical	Underway	Dec, 15, 1980
	Tank foundations	Underway	Oct. 30, 1980
	Tank modifications	Underway	Oct. 30, 1980
	Steelwork	Not begun	Nov. 30, 1980
	Carpentry	Underway	Oct. 30, 1980
	Insulation, heat tracing	Not begun	Dec. 15, 1980
	Earth moving	Not begun	Oct. 30, 1980

· C. CONSTRUCTION REQUIREMENTS

28.

- a. PREVENTION OF SURFACE-WATER POLLUTION: Spills on the outside of the processing building will not be possible because the new permanent facility includes a completely enclosed vapor-tight filling and transfer system. Spills on the inside of the building will be diked-off from the outside premises and will be either recycled to the process through sump pumps and (or) wet vacuums or, when appropriate, will be discharged to the sewer system. No spills inside or outside, can find their way to surface water because of the site topography which includes a 5 to 6 foot high sea-wall along the Des Plaines River.
- c. <u>ELIMINATION OF FLOOD HAZARD</u>, IF ANY: Flooding hazard from the Des Plaines River is alleviated by the relatively high sea-wall and the level regulation that is provided on the river by a series of locks and dams, the closest of which is located one-half mile south of the PAP site.

Flooding hazard from overland runoff and sewer surcharges has been minimized by elevating all PAP storage tanks above the 100 year flood level and by situating the processing facility on the upland portion of the property.

- d. EMPLOYEE FACILITIES: The new employee facilities are indicated on Exhibit 2 and include a new washroom facility including a shower and a new locker-room and lunch-room facility. An existing, first floor shower facility has been preserved as a safety shower.
- f. MEASURING QUANTITY OF WASTE DELIVERED TO THE SITE.

 Spent caustic scrubbing waste liquor is measured both by manifest procedures and by a flow-meter monitoring sewer flow. Spent pickle liquors or etchants are either measured by manifests or bills of lading and are also included in sewer flow-meter monitoring. Concentrated acid, when used, is measured by bills of lading and by sewer flow-meter.

PART V, B. OPERATING REQUIREMENTS, 30.

- a. PERSONNEL FOR SUPERVISION AND OPERATION: At present PAP employs 9 operating personnel, 2 trucking personnel, 1 manager and 2 partnership representatives. Operation is 5 to 6 days per week 24 hours per day. These hours may reduce when PAP permanent facilities are completed.
- b. TRAFFIC CONTROL: Traffic control is not a problem on-site inasmuch as only one tractor-trailer is required for transport.

 Most transporting is done during the evening and early morning hours to minimize the effects of traffic congestion.
- c. DESIGNATION OF UNLOADING AREA: An area is so designated in Exhibit 2.

 This provision allows for the efficient unloading of all incoming liquid materials.
- d. <u>DUST CONTROL</u>; Dust control has been accomplied at the PAP facility by grading the yard property with coarse crushed limestone.
- e. ODOR CONTROL: Odor control for the spent caustic scrubbing solution is accomplished in the permanent installation by the totally enclosed filling, transfering and storage system. Odor control during processing is accomplished by the inherent capabilities of the chemistry involved in the process, ie. sulfides are tied-up as ferrous or other metallic sulfides while the organic odors are markedly reduced by a combination of coprecipitation and adsorption of the odorous constituents on the metallic sulfides and hydroxides thus reducing volatility and odor potential.

The oily-float phase, that is a minor constituent of the spent caustic scrubbing solution, is odorous. PAP collects this material separately and sells it as fast as it accumulates to an organic reprocessor. Only a small quantity is kept in storage at any one in order to minimize odor potential. Except for an occasional housekeeping problem, PAP has had success in recent weeks in containing odor. The immediate neighbors to the north and to the south are aiding PAP in identifying problems if and when they exist. PAP then takes prompt action to find and eliminate souce of the problem. This form of cooperation has been underway for approximately three weeks.

- f. MANAGEMENT OF SURFACE WATER: Surface water in the form of overland runoff flows from west to east across the PAP site ponds against the Des Plaines river sea wall. When the rain ceases, the accumulated ponding slowly disappears due to a combination of evaporation and some infiltration. This characteristic of the overland runoff has been taken into account in the defelopment of the PAP facility.
- g. <u>EROSION CONTROL</u>: Erosion control at the PAP facility has been accomplished by the grading of the yard with coarse, crused stone.
- i. REUSE AND RECYCLING OPERATIONS: The PAP process is a reuse, recycling process. Spent acids containing metal ions are combined with the spent caustic scubber solution to yield an innocuous liquid and solid waste that are non-hazardous and which can be ultimately managed with ease. This conserves both virgin acid and virgin caustic as well as virgin metal that would otherwise be required to similarly

PART V. B., 1, (Cont.)

inactivate these wastes. A minor oily constituent is also recovered for further use. As time permits, PAP is also testing the resource potential of the byproduct filter cake material for beneficial use.

The steel and petroleum industry have waste coke and sour water streams similar to the NPC spent scrubber stream. There has been interest expressed by representatives of both industries in a similar application of this reuse PAP technology at other site locations.

WILL COUNTY

- 1. STATES ATTORNEY

 EDWARD PETKA

 WILL COUNTY COURT HOUSE

 14 WEST JEFFERSON STREET

 JOLIET, ILLINOIS 60431
- 2. WILL COUNTY BOARD

 TED GRABAVOY, CHAIRMAN

 WILL COUNTY COURT HOUSE

 14 WEST JEFFERSON STREET

 JOINET, ILLINOIS 60431

STATE LEGISLATORS 39th Legislative District

1. STATE SENATOR

ROBERT W. MITCHIER

SA9 STATE CAPITOL BLDG.

Spring Field, ILLinois 62706

2. REPRESENTATIVES

William KEMPINERS

628 STATE CAPITOL BUILDING

Spring Field, Illinois 62706

ALLAN L. SCHOEBERLein 2002 STRATION BUILDING Springfield, ILLINOIS 62706

LAWRENCE MURPhy 2126 Stratton Building Spring field, Illinois 62706

MUNICIPALITIES WITHIN THREE (3) MILE RADIUS OF SITE

City of JoLiet NANCY VALLERA, CLERK 150 W. JEFFERSON STREET JOLIET, ILLINOIS 60431

CITY OF CREST HILLS

ROBERT CONWAY, QLERK

1610 PLAINFIELD ROAD

CREST HILLS, ILLINOIS 60435

VILLAGE OF ROCK DALE

RALPH E. WOLZ, CLERK

1013 OTIS AVENUE

ROCK DALE, ILLINOIS 60436

ADJACENT LAND OWNERS

- 1. Joliet Project Office V.S. ARMY CORPS OF ENGINEERS 622 RAIL ROAD STREET Joliet, ILLINOIS 60434
- 2. CHARLES BORONI 1015 HELEN AVENUE JOLIET, ILLINOIS 60433

CITY OF JOLIET

ZONING BOARD OF APPEALS

150 W. JEFFERSON AVENUE

DOLIET, ILLINOIS 60431

BRUEL ECKMAN, SECRETARY

CITY OF JOILET

PLAN COMMISSION

150 W. JEFFERSON AVENUE

JOILET, ILLINOIS 60431

FRANK ALBERTS, DIRECTOR OF COMMUNITY DEVELOPMENT

- d) The clerk of each municipality, any portion of which is within three miles of the site.
- e) Adjacent landowners to the proposed site.
- f) Local zoning and planning agencies.
- 33. Provide the following documentary evidence sufficient to show: (See Armeneo)
 - a) That the facility is located so as to minimize scenic blight, and to avoid damage to archaeological and/or historic sites and areas of significant natural beauty;
 - b) That the facility is located so as to avoid any hazards to public health and safety and to minimize any offenses to the senses of persons residing, working, traveling, and/or in any way spending periods of time in the immediate vicinity.

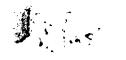
 Immediate vicinity is here defined to mean a one-mile radius zone adjacent to the boundary of the site;
 - c) Taking into consideration the character of the area involved, including the character of surrounding land uses and the trend of development, as well as local comprehensive plans and zoning ordinances, that the facility is located so as to minimize incompatibility with the character of the surrounding area.
 - d) That the facility is located so as to avoid causing substantial depreciation of nearby property (taking into consideration, where possible, any mitigation caused by the short proposed life of the site and end use);
 - e) That any detriments caused by removal of the site from its former use are out-weighed by the need in the area for such a facility at this location;
 - f) That the facility is located so as to avoid a continued adverse effect on existing air and water quality; and
 - g) Taking into consideration geological and hydrological factors, the location of the site in relating to sources of solid waste and accessibility to transportation modes, and the technical feasibility and economic reasonableness of disposing of solid waste at the proposed location, that the facility is suited for its intended use.
 - h) That access roads and bridges are not limited to preclude necessary vehicular traffic (i.e. proposed size and weight limits).

I hereby affirm that all information contained in true and accurate to the best of my knowledge and beli	
Signature of Applicant: Source E. Marderland	5-10/10/80
Attest: Salas for Sunday	Date 10/10/00 Date
Signature of Engineer:	10/10/80
Illinois Reg. No: 62-33014	
Attest: Sallin A Saidar	10/10/90 Date
	: N
Signature of Landowner(s): The Dark	w 10-10-80 Date
Attest: Phill A. Mindre	- 10/10/pd
The state of the s	Date
En	gineer (Seal)
Signature of other person, technical and non-techn supplied data contained in the submittal.	rical, who has
Signature	Date
J	
Reg. No., Position, Title, Etc.	-
En	gineer (Seal)
Signature	Date
Reg. No., Position, Title, Etc.	·. -
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	(Seal)
SAS:bls/7055A/sp	

Page 10 of 10

PART VI, 33

- a. The PAP facility adjoins an industrially used waterway to the east; a major highway, railroad and landfill to the west; vacant property and the I-80 bridge over the Des Plaines River to the north; and vacant property and federal agency (US Army Corps of Engineers) construction operation and maintenance yard facility to the south. This is somewhat obvious by examining the USGS quad sheet. The PAP facility is thus compatible with its setting. There are no archeological or historical sites or areas of natural beauty in near proximity inasmuch as the PAP and surrounding sites are all on filled land as a result of the channelization and containment of the Des Plaines River.
- b. The PAP facility and process produces no hazardous discharges. The earlier PAP odor problem has been contained with good housekeeping practices as documented by the significant reduction in odor complaints registered with the city (Dennis Duffield, Utility Department Director) in recent weeks. The few minor odor incidences were due to housekeeping problems and did not prevail beyond PAP's immediate neighbors. Once notified, the odors were promptly controlled and eliminated.
- c. The PAP facility is compatible with present land-use and I-2 zoning and with Joliet current and future land-use planning.
 PAP undertook meetings with Joliet's Planning and Zoning Department in the person of Frank Alberts, the Department Director, prior to locating at the present site and was given an unqualified go-ahead.
- d. In view of PAP's compatability with area land use, zoning and cultural development, it would be inconsistent to expect substantial depreciation as a result of PAP's presence. PAP has also demonstrated an ability to be a good neighbor the majority of the time and is cooperating with the immediate neighbors to eliminate any residual problems. Bob Barker, the PAP site owner, reviewed the nature of PAP's operation with Kenneth King, a local Joliet realtor, prior to leasing PAP the property. Ken King has since represented other owners in real estate transactions in the area.
- e. The PAP site was being used for industrial welding machinery storage prior to PAP leasing the site. The owner of the site, Robert Barker, chose to rent the facility to PAP because his industrial welding business was not prospering. As a result PAP has employed a number of persons, some from the Joliet area, and has introduced a significant quantity of funds into the Joliet-area economy for supplies, services and new construction expenditures. The site, furthermore, is advantageously located for the processing of the spent caustic liquor because of the relative proximity to the source, Northern Petrochemical Company, near Morris, Illinois.
- f. The PAP facility does not have a negative impact on existing water quality as indicated by existing water permits. The earlier odor negative impact on air quality has largely, if not completely, been eliminated as certified by the reduction in odor incidences and complaints. Any residual odor impact will be eliminated as house-keeping is further improved and as the permanent facilities are completed. There will be no continued adverse odor impact on air quality.



PART V1, 33 (Cont.)

- g. The PAP facility is ideally located given the nearby accessibility to the spent caustic scrubber liquor, the available and necessary municipal treatment plant and the across-the-highway availability of a suitable landfill for the management of the by-product filter-cake. The location map documents this statement.
- h. PAP transport has both Interstate 80 and Highway 6 adjoining the facility. Each of these routes efficiently reach the source of the spent caustic scrubber liquor near Morris, Il. Each of these routes is fully capable of carrying the tractor-trailer combination used by PAP as they are arterial highways as indicated on the location map.